# Day 2 Introduction

This session will focus on teaching attendees about Intents and SQL in android using sample problem.

# Session Objectives / Key Learning Points

# By the end of the session students should –

# Understand how Intents are used in Android apps.

# Understand what are explicit and implicit Intents

# Be able to implement a simple application use intents for capturing image.

# Understand how SQLite helps to make android data storage.

# Be able to implement a simple application which uses SQLite.

# Session Overview

|  |  |  |
| --- | --- | --- |
| **Activity** | **Time** | **Elapsed Time (hh:mm)** |
| Make sure the system is setup | 00:05 | 00:05 |
| Introduce Agenda | 00:02 | 00:07 |
| Introduce the basics of an explicit and implicit Inetnts | 00:13 | 00:20 |
| Assignment 1 | 00:20 | 00:40 |
| Discuss Assignment 1 solution | 00:10 | 00:50 |
| Introduce Sql in android | 00:15 | 01:05 |
| Assignment 2 | 00:20 | 01:25 |
| Discuss Assignment 2 solution | 00:15 | 01:40 |
| Discuss what intent filters are | 00:15 | 01:55 |
| Recap of things covered | 00:05 | 02:00 |

## Session Notes

### What Intents are -

* Messages which allows different android components to interact with each other.
* Intents signal android that some event has happened.
* The methods like startActivity() is “method call” to send intents
* Insert user-permission in android manifest.

### What Kranti is about -

* Kranti-Android structure:

### Explain how we will be starting a new Activty:

* Launch camera activity (as implicit Intent)
* Get result of camera activity in “Caller activity”
* Use this result data to show on layout

### Examples – 1 Capture Image

#### Problem -

* Use CaptureIssueActivity in Kranti-android app for start camera
* Capture image using the opened camera app
* Show the image as thumbnail on layout of CaptureIssueActivity

#### Pattern/Solution -

* Use startActivityForResult for MediaStore.ACTION\_IMAGE\_CAPTURE
* Use result code same as that of request code to get result data
* Use bitmap to convert result data to image

### What is SQLite-

* SQLite is light weight relational database
* On android no setup or administration is required.
* Data is stored at DATA/data/APP\_NAME/databases/FILENAME
* This SQLiteOpen helper provide getReadableDatabase and getWrittableDatabase

### Explain how we will be using SQLite:

* The datastorage class will extend SQLiteOpenHelper
* Override onCreate and onUpgrade methods
* In on Create method create the database with initial version\

### Examples – 2 Create database in Android

#### Problem -

* Stroe issue title and description in database
* Fetch issue title and description from database

#### Pattern/Solution -

* Use issueRepository to call a class that intercat with database
* Extend SQLiteOpenHelper
* Use prepared statements of java sql to create update and delete

### Explain how intent filter works in android

* AndroidManifest: for an activity in android manifest we can have intent filter
* For e.g. browsable content (like a youtube link can be opened using browser as well as youtube app)
* The intent than propagates to activity where we can use the data
* Use any example on net to demonstrate how intent filter works (we used ideaboardz https://github.com/dhavalsdoshi/orteroid)

## Equipments Required

* Git to be installed on graduates computers
* Internet connectivity
* IntelliJ IDEA having android sdk
* Emulator

## Activity/Exercise Set up and Requirements

* Projector